

ABSTRACT

According to one embodiment, an isolation barrier comprises a transformer and a controlled impedance module. The system side device generates an amplitude modulated clock signal when the system side device is in a transmit mode, and generates an

5 unmodulated clock signal when the system side device is in a receive mode. When the system side device is in the receive mode, the controlled impedance module modulates, according to the data being transmitted by the line side device, the unmodulated clock signal incoming from the system side device. The transformer is utilized in bi-directional data transfer to provide the line side device with the amplitude modulated clock signal

10 generated by the system side device, while providing the system side device with the amplitude modulated clock signal generated by the controlled impedance module and the line side device.